TITLE INDEX

Volume 48

1976

A

A chemical-biological treatment process for cellulose nitrate disposal (Wendt, Kaplan) 660
A comparison of two diversity indexes used in wastewater impact assessments (Stoneburner, Smock, Eichhorn) 736
A comparison of several water quality indexes (Landwehr, Deininger) 954
A forced aeration system for composting wastewater sludge (Epstein, Willson, Burge, Mullen, Enkiri) 688
Agency Rules and the Congressional Veto (editorial) 1873
A matrix approach for determining wastewater management impacts (DeFilippi, Phillips) 1759
A model of substrate utilization by bacterial films (Williamson, McCarty) 9
A note on the design of nutrient enrichment studies (Ramm, Karn) (Communication) 2211
A plea for flexibility (editorial) 621
A scientific basis for determining recreational water quality criteria (Dudley, Hekimian, Mechalas) 2761
A study of bacterial aerosols at a wastewater irrigation site (Sorber, Basum, Schaub, Small) 2367
Acclimation of wastewater bacteria by induction or mutation selection (Varma, Wan, Prasad) 832
Activated carbon from activated sludge (Bosch, Kleerebezem, Mars) 551
Activated sludge process with alum addition and heat treatment (Gray, Gerber, Paul) 163
Activated sludge treatment of yeast industry wastewater (Wu, Kao) 2609
Adsorption of organic compounds by synthetic resins (Kim, Snoeyink, Saunders) 120
Adsorption of inorganic phosphorus by lake sediments (Hwang, Lackie, Huang) .. 2754
Aerobic thermophilic treatment of high strength wastewaters (Surucu, Chian, Engelbrecht) 669
Algal bioassays to evaluate a proposed cooling lake (Gerhold, Otto) 2351
Alteration of microbial populations in thermal stress (Guthrie, Cherry, Singleton) .. 962
Alternatives to a silver catalyst in chemical oxidation demand analysis (Moore) .. 2327
Analytic variability: implications for permit compliance (Monitor) 1876
An automated biological nitrification toxicity test (Stensel, McDowell, Ritter) 2343
An evaluation of aqueous phase catalytic oxidation (Katzer, Ficke, Sadana) ... 920
Apparent molecular weights or organics in secondary effluents (Sachdev, Ferris, Clesceri) 570
Applications of a new coefficient of similarity to pollution surveys (Pinkham, Pearson) 717, 2812
Assessing EPA's cost of clean environment report (Monitor) 1874

B

Biochemical and physical-chemical treatment of weak municipal wastewater (Thirumurthi, Orlando) 2708
Biological communities near submarine outfall (Smith, Green) 1894
Biological destabilization of wool scouring effluents (Christoe, Anderson, Wood) 729
Biological nitrification of sludge supernatant by rotating disks (Lue-Hing, Obayashi, Zenz, Washington, Sawyer) 25
Biological treatment of feedlot runoff (McGhee, Backer, O'Neal) 153
Breidenback takes on a big job at EPA (Monitor) 6
Building New Programs on Old Foundations (Wagner-presidential message) 2098

C

Cannery waste biological sludge disposal as cattle feed (Esvelt, Hart, Heinemann) 2778
Carpet and rug industry case study I: Water and wastewater plant operation (Gaffney) 2590
Carpet and rug industry case study II: Biological effects (Gaffney) 2731
Changes urged at NCWQ hearings (Monitor) 230
Characteristics of *Klebsiella* from textile finishing plant effluents (Dufour, Cabelli) 872
Chlorination and iodination of poliovirus and f_2 (Cramer, Kawata, Kruse) 61
Chromium effects on coastal organisms (Mearns, Oshida, Sherwood, Young, (Reish) 1929
Coliphage interference in the recovery of coliform bacteria (Schiemann, Manley, Arnold) 533
Community metabolism in a refinery holding pond (Siegal, Harrel) 2249
Comparative effects of chemical pretreatment on carbon adsorption (Westrick, Cohen) 323
Comparative toxicity of polyelectrolytes to selected aquatic animals (Biesinger, Lemke, Smith, Tyo) 183
Comparison of air and oxygen activated sludge systems (Kalinske) 2472
Contaminants in the New York Bight (Mueller, Anderson, Jeris) 2309

Correlation of BOD, COD and soluble organic carbon (Viraraghavan) (Communication) 2213
Cost functions for wastewater conveyance systems (Tyteca) 2120
Crop response to tank truck application of sludge (Kelling, Walsh, Peterson) ... 2190
Cyanophage analysis as a biological pollution indicator—bacterial and viral (Smedberg, Cannon) 2416

D

Dangers of wastewater aerosols: Evidence to date (Monitor) 631
DDT in sediments and organisms around southern California outfalls (Young, McDermott, Heesen) 1919
Degradation of NTA acid during anaerobic digestion (Moore, Barth) 2406
Denitrification of nitrified septic tank effluent (Sikora, Keeney) 2018
Denitrification of wastewater effluents with methane (Sollo, Mueller, Larson) (Communication) 1840
Design and control of nitrifying activated sludge systems (Lawrence, Brown) .. 1779
Design procedure for a contact-stabilization activated sludge process (Benefield, Randall) 147
Destruction of alkalinity in aerobic biological wastewater treatment (Sherrard) 1834
Detoxification of bleached kraft mill effluents (Mueller, Walden) 502
Dispersion of enteric bacteria by spray irrigation (Katzenelson, Teltch) 710
Dispersion of liquid waste from a moving barge (Ball, Reynolds) 2541
Dissolved air flotation of poultry processing waste (Reed, Woodard) 107
Distribution of stream pollution in lake water (Tew, Egdorf, Deacon) 867

E

Effect of high dissolved oxygen concentration in activated sludge systems (Chapman, Matsch, Zander) 2486
Effect of variable loading on oxygen uptake (Duggan, Cleasby) 540
Effect of wastewater composition and cell residence time on phosphorus removal in activated sludge (Stall, Sherrard) 307
Effects and persistence of endothall in the aquatic environment (Holmberg, Lee) 2738
Effects of dosing rates on trickling filter performance (Cook, Crame) 2723
Effects of lime addition on treatment plant operation (Minton, Carlson) 1697
Effects of low ΔT power plant temperatures on estuarine invertebrates (Burton, Richardson, Margery, Abell) 2259
Effects of selected ions on the removal of chrome (III) hydroxide (Thomas, Theis) 2032
Efficiency of a septic tile system (Viraraghavan, Warnock) 934
Efficiency of diffused aeration systems in wastewater treatment (Mavinic, Bewtra) 2273
Elemental distribution diagrams for biological wastewater treatment (Sherrard, Benefield) 562
Enforcement of municipal permits: portent of problems (Monitor) 422
Enrollment trends in environmental programs (Monitor) 1690
Environmental impacts of land application of sludge (Zenz, Peterson, Brooman, Lue-Hing) 2332
EPA focuses on municipal enforcement (Monitor) 2114
EPA proposes untimely amendments (Monitor) 424
EPA switches to new cost indexes (Monitor) 233
Estimating personnel needs for wastewater treatment plants (Burke) 241
Evaluation of chemical-biological and chemical-physical treatment for textile dyeing and finishing waste (Shelley, Randall, King) 753
Evaluation of metals in wastewater sludge (Stover, Sommers, Silveira) 2165
Experiments on wastewater sedimentation (White, Allos) 1741

F

Factors affecting powdered carbon treatment of a municipal wastewater (Wallace, Burns) 511
Federation objectives in 1976 (editorial) .. 1
Flow data collection for infiltration-inflow analysis (Maynes) 2055
Foam separation for detoxification of bleached kraft mill effluents (Ng, Mueller, Walden) 458
Focusing on nonpoint sources (Monitor) .. 3
Folklore in the design of final settling tanks (Dick) 633
Ford and Carter: contrasting approaches to environment (Monitor) 2238
Functional design of sanitary sewers (Yao) . 1772

G

Grant aid for plant operation: an evaluation (Hetling, Mack, Carcich, Klimek) 2529

H

Heavy metals—induced deflocculation of activated sludge (Neufeld) 1940
House Committee marks up HR 9560 (Monitor) 812

I

Identification of orthophosphate solids formed by lime precipitation (Zoltek) . 179
Implementing NCWQ's recommendations (editorial) 809

Indexes associated with information theory in water quality (Zand) 2026
Industrial employment and the environment (editorial) 229
Infiltration characteristics from anaerobic lagoons (Hills) 695
Inhibition of nitrification by ammonia and nitrous acid (Anthonisen, Loehr, Prakasam, Srinath) 835
Interactions between sludge conditioning, vacuum filtration, and incineration (Christensen, Elliott, Johnson) 1955
Irrigated agriculture: nonpoint and point source water pollution (Monitor) 2116

K

Kinetics of the lactate-ozone reaction in an open-loop system (Walter, Sherman) . 748
Klebsiella densities in water receiving wood pulp effluent (Huntley, Jones, Cabelli) 1766

L

Laboratory evaluation of nutrient inactivation compounds for lake restoration (Peterson, Sanville, Stay, Powers) 817
Lake treatment with fly ash, lime, and gypsum (Higgins, Mohleji, Irvine) 2153
Least cost design of activated sludge systems (Middleton, Lawrence) 889
Loads on buried rigid conduit (Havell, Keeney) 1988
Local financing—Next hurdle for grant program? (Monitor) 627
Long-term biodegradability of textile chemicals (Porter, Snider) 2198

M

Making NEPA more effective. (editorial) .. 1681
Marine organisms around outfall pipes in Santa Monica Bay (Allen, Pecorelli, Word) 1881
Mass transfer limitations on trickling filter design (Schroeder, Tchobanoglous) .. 771
Measurement of metal toxicity by biochemical oxygen demand (Mowat) 853
Mercury uptake by fish and biomethylation mechanisms (Shin, Krenkel) 473
Metal contamination of flatfish around a large submarine outfall (McDermott, Alexander, Young, Mearns) 1913
Microbial product formation and variable yield (Sykes) 2046
Micromethods for the determination of nonfilterable and filterable residues (Carter, Huston, Logsdon) 652
Minneapolis-St. Paul: Land of the "Shining Big-Sea-Waters" (Vandervoort, Denisen) 2107
Modeling of vented hydroturbine reaeration (Quigley, Boyle) 357
Modified activated sludge process for treatment of nitrogen deficient organic wastes (Yang, Chan) 1992
Monitoring a deep marine wastewater outfall (Balch, Ellis, Littlepage, Marles, Pym) 429
Most probable number versus membrane filter on chlorinated effluents (Mowat) .. 724
Moving toward metric (editorial) 421

N

Natural stream purification under anaerobic conditions (Gundelach, Castillo) 1753
NCWQ recommends changes in water pollution act (Monitor) 622
NCWQ Reports Available, listing of contractor reports of National Commission on Water Quality 2427
Nitrification in high-sludge age contact stabilization (Zoltek, Lefebvre) 2183
Nitrification in natural streams (Bansal) ... 2380
Nitrogen availability in urban runoff (Cowen, Sirisinha, Lee) 339
Nutrient profiles of bay sediment (Poon, Sheih) 2007

O

Ocean dumping phase-out in EPA Region II (Monitor) 2246
Odor control with hydrogen peroxide (Cole, Paul, Brewer) 297
One- versus two-stage nitrification in the activated sludge process (Stover, Kincannon) 645
Optimization of multistage secondary clarifier (Lee, Fan, Takamatsu) 2578
Oxidation of phenols by ozone (Gould, Weber) 47
Oxygen and air activated sludge: another view (Parker, Merrill) 2511

P

pH profiles in a river system with multiple acid loads (Yeasted, Shane) 91
Phosphorus availability in particulate materials transported by urban runoff (Cowen, Lee) 580
Phosphorus removal with alum from secondary effluent (Francisco, Strauss, Dempsey) 2002
Phosphorus transport in a packed-bed reactor (Overman, Chu, Leseman) 880
Physical and economic parameter for planning wastewater treatment systems (Klemetson, Grenney) 2690
PL 92-500: New federalism or federal takeover (Monitor) 238
Politics and pollution control (editorial) ... 2237
Pollution monitoring with total organic carbon (Chandler, O'Shaughnessy, Blanc) 2791
Prediction of phosphorus and chlorophyll levels in lakes (Jones, Bachmann) ... 2176
Pseudomonas aeruginosa-fecal coliform relationships in estuarine and fresh recreational waters (Cabelli, Kennedy, Levin) 367

R

Relation of operation and maintenance to treatment plant efficiency (Gilbert) .. 1822
Remote sensing and water quality (Monitor) 2243
Removal of cadmium ion from aqueous solution (Chou, Okamoto) 2747
Removal of sulfate from industrial wastewaters (Christoe) 2804
Response of activated sludge to quantitative shock loading (Krishnan, Gaudy) 906
Restoring the Willamette River: costs and impacts of water quality control (Huff, Klingeman) 2410
Revamping toxics control program at EPA (Monitor) 810
Reverse osmosis as an advanced treatment process (Lim, Johnston) 1804

S

Salt water domestic waste treatment (Kessick, Manchen) 2131
Sand filtration and activated carbon treatment of poultry process water (Berry, Lafayette, Woodward) 2394
Say good-bye to ocean dumping (Monitor) . 426
Silver in photoprocessing effluents (Bard, Murphy, Stone, Terhaar) 389
Single-stage nitrification-denitrification (Bishop, Heidman, Stamberg) 520
Site-specific evaluation of power plant chlorination (Mattice, Zittel) 2284
Soil adsorption of humic color (McGhee, Miller) 1970
Soybean yield responses and assimilation of Zn and Cd from sewage sludge-amended soil (Hinesly, Jones, Tyler, Ziegler) ... 2137
Spill penalties draw criticism (Monitor) ... 236
Stimulation of denitrification in soil columns by adding organic carbon to wastewater (Lance, Whisler) 346
Stoichiometry of industrial biological wastewater treatment (Sherrard, Schroeder) 742

T

Temperature effects on BOD stoichiometry and oxygen uptake rate (Flegal, Schroeder) 2700
The attraction of fish (communication) (Katz, Harder) 592
The effect of coal surface mining on water quality of mountain drainage basin streams (Minear, Tschantz) 2549
The effect of digested sludge on soil biological activity (Varanka, Zablocki, Hinesly) 1728
The lethality of an intact and degraded LAS mixture to bluegill sunfish and a snail (Dolan, Hendricks) 2570
The literature review, as readers see it (editorial) 997
The significance of pore diffusion to filter denitrification (Harremoes) 377
The use of carbon dioxide in sampling and preserving natural leachates (Korte, Niebla, Fuller) 959
The use of fluid catalytic cracking catalyst in activated sludge wastewater treatment (Schwartz, McCoy) 274
Toward a more meaningful index of sludge quality (Fitch, Kos) 1979
The widening scope of WPCF conferences (editorial) 2097
Tracer measurement of reaeration: predicting the capacity of inland streams (Tsivoglou, Neal) 2669

U

Ultrafiltration of wool scouring effluents (Pearson, Anderson, Wood) 945
Ultraviolet disinfection: an alternative to chlorination (Oliver, Carey) 2619
Upgrading a complete mix activated sludge wastewater treatment plant (Uhte) .. 2653
Utilization of alumized red mud solids for phosphorus removal (Shannon, Verghese) 1948
Utilization of wastewater sludge for agricultural soil enrichment (Hyde) 77

V

Vanadium removal from industrial wastewaters (Kunz, Giannelli, Stensel) 762
Verification studies of the biofilm model for bacterial substrate utilization (Williamson, McCarty) 281
Volumetric determination of grease in wastewater (Maxcy) 2809

W

Waste treatment at a complex plastics manufacturing plant (Campbell, Rocheleau) 256
Water quality modeling of deep reservoirs (Anderson, Dracup, Fogarty, Willis) . 134
Waterfowl refuge effect on water quality: II. Chemical and physical parameters (Brandvoid, Popp, Brierley) 680
What 208 planning can do: A local and a federal view (Monitor) 1692

AUTHOR, SUBJECT, AND GEOGRAPHICAL INDEX

Volume 48

1976

A

Abell, P. R., thermal impact 2259
Acclimation, mutation selection 832
Acid mine dr..inage, model 91
Activated carbon, adsorption 2394
  adsorption of organics 120
  comparison with spent refinery catalyst .. 274
  from activated sludge carbonization 551
  treatment variables 511
  treatment of textile wastes 753
Activated sludge, air and oxygen systems 2472, 2511
  deflocculation of 1940
  design aspects of 163
  heavy metals in 1940
  nitrogen deficient wastes 1992
  pure oxygen system 2486
  source of activated carbon 551
  upgrading a complete mix plant 2653
Activated sludge process, contact stabilization design 147
  cost optimization of 889
  design for nitrification 1779
  effect of photoprocessing wastes 389
  for feedlot runoff 153
  for yeast wastes 2609
  for plastics manufacturing wastes 256
  industrial waste treatment 742
  kraft effluent detoxification 502
  loading and oxygen uptake 540
  nitrification 2183
  nitrification-denitrification 520
  nitrocellulose disposal 660
  operational performance 86a
  P removal 307
  activated sludge treatment (literature review) 1098
Adsorption, of humic color by soil 1970
  powdered activated carbon 511
  organic compounds 120
  treatment of textile wastes 753
Adsorption properties, synthetic resins and activated carbon 120
Advanced waste treatment, adsorption of organics 120
  foam separation of cadmium 2747
  reverse osmosis 1804
  carbon adsorption 323
Aeration, efficiency 2273
  in vented hydroturbines 357
  of composted sludge 688
Aerators, broken-spiral 256
  efficiency 2273
Aerobic processes, thermophilic wastewater treatment 669
Aerosolization, of bacteria by spray irrigation 710
Aerosols, at a wastewater irrigation site ... 2367
  from wastewater treatment 631
Agricultural spray irrigation, with wastewater 710
Agricultural wastes, feedlot runoff 153
  (literature review) 1263
Agriculture, use of digested sludge 77
Alexander, G. V., trace metals 1913
  availability of nitrogen in urban stormwater 339
  phosphorus availability in urban stormwater 580
  bioassays in cooling ponds 2351
algae growth, effect of taconite tailings 144a, 681a
Alkalinity, destruction of 1834
Allen, M. J., organisms near outfall pipes .. 1881
Allos, M. R., wastewater sedimentation 1741
Alum, phosphorus removal 2002
  treatment of textile wastes 753
Alum addition, for removal 107
Alum precipitation, for phosphorus removal 163
Alumized red mud solids, phosphorus removal 1948
Ammonia, nitrification inhibition 835
  removal from sludge supernatant 25
Anaerobic conditions, in stream self-purification 1753
Anaerobic digestion, nitrocellulose disposal . 660
  of NTA 2406
Anaerobic lagoons, infiltration characteristics from 695
anaerobic processes (literature review) ... 1115
Anaerobic sludge metal determination 2165
Analysis, water quality diversity index 2026
Analytical methods, grease 2809
  effects on permits 1876
  silver catalyst in COD 2327
Anderson, A. R., *New York Bight* 2309
Anderson, C. A., ultrafiltration 945
  wastewater treatment 729
Anderson, D. R., reservoir modeling 134
Anthonisen, A. C., nitrification inhibition ... 835
Apparent molecular weight, of wastewater effluents 570
Aquatic life, chlorine toxicity 2284
Aquatic systems, bacterial populations in ... 962
  measurement of similarity 717, 2812
Areawide planning, case studies 1692
Arizona WPCA, meeting report 963a
Arkansas WPCA, meeting report 439a
Arnold, M. O., coliform recovery 533
Assessment of wastewater impact, indexes for 736
Association Quebecoise des Techniques de l'Eau, meeting report 441a
Automated analysis (literature review) 1077

B

Bachmann, R. W., phosphorus and chlorophyll 2176

Backer, D. S., feedlot runoff 153
Bacteria, acclimation by mutant selection .. 832
Bacterial die-off, effect of thermal loading on 962
Bacterial distribution, in lake distribution .. 867
Bacterial film model, substrate utilization .. 9
substrate kinetics 281
Bacterial populations, in wastewater effluents 962
Bacteriological analysis, of wastewater aerosols 2367
Baker, R. A., kinetic models activated sludge process (Discussion) 1846
Balch, N., outfall monitoring 429
Ball, J., ocean disposal 2541
Baltimore sewer systems, infiltration/inflow . 2055
Bansal, M. K., nitrification 2380
Bard, C. C., photoprocessing wastes 389
Barging, dispersal pattern of wastes 2541
Barth, E. F., NTA degradation 2406
Bausum, H. T., bacterial aerosols 2367
Benefield, L. D., contact stabilization 147
distribution diagrams 562
Bennett, G. F., aeration equipment performance (Discussion) 966
Benthic community, diversity index for 736
effluent effects on 1894
near submarine outfall 1894
Berry, L. S., poultry processing 2394
Bewtra, J. K., aeration systems 2273
Biesinger, K. E., polyelectrolyte toxicity ... 183
Bioassays (literature review) 1356
for metal toxicity 853
of algae in cooling pond 2351
toxicity of polyelectrolytes to fish 183
Biochemical stoichiometry, of industrial wastewater 742
Biochemical treatment, of textile wastes ... 753
of weak wastewater 2708
Biodegradability, of textile chemicals 2198
Biodegradation, domestic wastes-seawater system 2131
Bioindicators, for fecal coliforms 367
Biological denitrification, pore diffusion in filters 377
Biological effects, of chromium 1929
trace metals 1913
Biological filters (literature review) 1096
Biological processes, in powdered carbon adsorption 511
thermophilic wastewater treatment 669
Biological wastewater treatment, distribution diagrams for 562
effects of lime 1697
of feedlot runoff 153
microbial product formation 2046
P removal 307
textile industry 2198
of wastewater effluents 729
of weak wastewater 2708
spent refinery catalyst as aid 274
of textile wastes 2590
Biomass response, to shock loads 906
Bishop, D. F., nitrification-denitrification .. 520
Blanc, F. C., total organic carbon 2791
BOD, metal toxicity measurement 853
textile chemicals 2198
temperature effects on 2700
BOD removal, oxygen activated sludge 2486
bonds, to finance treatment works 627
Bosch, H., activated carbon 551
Boyle, W. C., vented hydroturbine reaeration 357
Brandvold, D. K., water quality in waterfowl refuges 680
Brewer, H. P., odor control 297
Brierley, J. A., water quality in waterfowl refuges 680
Brooman, D. L., land application of sludge 2332
Brown, C. G., nitrifying activated sludge .. 1779
Burge, D. D., sludge composting 688
Buried pipe, effects of loads on 1988
Burke, G. W., Jr., staffing treatment plants . 241
Burns, D. E., powdered carbon treatment . 511
Burton, D. T., thermal impact 2259

C

Cabelli, V. J., *Klebsiella* characteristics 872
Klebsiella densities 1766
Pseudomonas aeruginosa and fecal coliforms as bioindicators 367
Cadmium, foam separation of 2747
Camden, N. J., ocean dumping curbs 2246
Campbell, H. J., Jr., plastics manufacturing wastes 256
Cannon, R. E., cyanophage analysis 2416
Carbon, distribution in sediments 2007
distribution in biological treatment 562
Carbon adsorption, comparison with synthetic resins 120
effects of chemical pretreatment 323
Carcich, I. G., grant aid 2529
Carey, J. H., UV disinfection 2619
Carlson, D. A., lime addition effects 1697
Carter, M. J., residue determinations 652
Castillo, J. E., oxygen sag 1753
Catalytic oxidation, evaluation as treatment technique. 920
Cattle wastes, treatment of 153
Cell residence time, effect of shock loads on 906
Cellulose nitrate, chemical-biological treatment 660
Central States WPCA, meeting report 503a
Centrifugation, to dewater biological solids . 2778
Chan, L. K., activated sludge 1992
Chandler, R. L., total organic carbon 2791
Chapman, T. D., oxygen activated sludge .. 2486
Chemical flocculation, for effluent purification 729
Chemical industry wastes (literature review) 1313
Chemical treatment, effect on powdered carbon adsorption 511
effect on wastewater microorganisms 2731
for sludge disposal 1955
nitrocellulose disposal 660
phosphorus removal 1948
yeast wastes 2609
Chemicals, markets in water treatment 815

Cherry, D. S., microbial populations 962
Chian, E. S. K., poliovirus inactivation (Discussion) 593
thermophilic treatment 669
Chiller water, dissolved air flotation of 107
Chlorination, virus inactivation 61
Chlorine, attraction of fish 592
toxicity to aquatic life 2284
compared with UV for disinfection 2619
Chlorophyll, concentration prediction in lakes 2176
Chlorophyll *a*, interaction with oxygen 134
Chou, J., foam separation of cadmium 2747
Christensen, G. L., sludge conditioning and incineration 1955
Christoe, J. R., wastewater treatment 729
wool wastewater sulfates 2804
Chromium, coagulation and removal 2032
sub-lethal effects 1929
Chu, R.-L., packed-bed reactor 880
Clarification, mathematical model of 2578
to improve nitrification 25
multistage 2578
Cleasby, J. L., oxygen uptake 540
Clesceri, N. L., molecular weight 570
Coagulation, chromium removal 2032
effects on carbon adsorption 323
of sulfates 2804
salt water waste treatment 2131
Coagulants, toxicity to fish 183
Coal and coal mine drainage (literature review) 1284
Coal mining, effect on water quality 2549
COD:P ratio, effect on P removal 307
COD reduction, phenol ozonization 47
COD test, alternatives to silver catalyst 2327
Cohen, J. M., carbon adsorption 323
Cole, C. A., odor control 297
Coliforms, analytical methods 724
Klebsiella as indicator of 872
recovery of 533
removal from composted sludge 688
from marine outfalls 429
chlorination effects on tests 724
Coliphages, interference in coliform recovery 533
Collection system, design of 1772
Color removal, soil adsorption 1970
from textile wastes 753
yeast processing wastes 2609
Combined sewers, eligibility for grants 88a
Composting, wastewater sludge 688
Computer model, for treatment systems 2690
Construction cost index
3rd quarter 1975 ..... 88a
1st quarter 1976 ..... 282a
2nd quarter 1976 ..... 496a
new format for EPA indexes 233
Construction grants, combined sewers and stormwater overflows 88a
municipal share of 627
Contact stabilization, nitrification in 2183
process design 147
Contaminants, discharged into coastal waters 2309
Continuous flow column, for denitrification . 2018
Cook, E. E., trickling filter dosing 2723
Cooling water, chlorination effects 2284
Correlation, of TOC, to BOD, COD 2791
Cost effectiveness, infiltration/inflow analysis 2055
Costs, for environmental control 816
EPA report on nationwide forecast 1874
for sludge disposal 426
equations for treatment systems 2690
Cost optimization, of activated sludge process 889
for regional systems 2120
Cowen, W. F., nitrogen in urban runoff ... 339
phosphorus in urban runoff 580
Crame, L., trickling filter dosing 2723
Cramer, W. N., virus inactivation 61
Cyanide, toxicity by BOD test 853
Cyanide wastes (literature review) 1295

D

Dairy wastes (literature review) 1311
DDT, residues in fish and benthos 1919
Deacon, J. E., pollution distribution 867
Deep marine outfall, monitoring of 429
DeFilippi, J. A., wastewater management impacts 1759
Deflocculation, of activated sludge 1940
role of heavy metals 1940
Degradation, and detoxification rate of endothall 2738
of LAS surfactant 2570
Deininger, R. A., water quality 954
Dempsey, B. A., phosphorus removal 2002
Denisen, K. A., Minn.-St. Paul pollution control 2107
Denitrification, in soil columns 346
of septic tank effluent 2018
pore diffusion 377
with methane 1840
with nitrification process 520
Design, of final settling tanks 633
mass transfer in trickling filters 771
Design criteria, activated sludge process .. 163
Destabilization, of effluents 729
Detergents (literature review) 1110
NTA anaerobic degradation 2406
Detoxification, of kraft mill effluents 458
Dewatering of sludge, effects of liming raw waste 1697
Diatoms, community diversity 736
Dick, R. I., settling tank design 633
Diffusion, model of, substrate kinetics 9, 281
Digested sludge, for agricultural soil enrichment 77
Digestion of sludge, effects of liming raw waste 1697
Discharge from power plant, effect on macroinvertebrates 2259
Discharge pipes, organisms near 1881
Discharge requirements, upgrading primary treatment 163
Disinfection (literature review) 1166
UV versus chlorine 2619
virus inactivation 61
Dispersion, barged wastes 2541

Disposal of sludge, as cattle feed 2778
effects of liming raw waste 1697
Dissolved air flotation, of poultry processing waste 107
Dissolved oxygen, water quality modeling . 134
Distribution diagrams, of influent elements . 562
of methylmercury 473
Distribution matrix, for stream pollution ... 867
Diversity indexes, of biological communities 2026
comparison of 736
Dolan, J. M., III, LAS lethality 2570
Domestic waste treatment, salt water 2131
Dosing, trickling filters 2723
Dracup, J. A., reservoir modeling 134
Dredging, effect on nutrients 2007
Drinking water, contamination 496a
Dudley, R. H., recreational water 2761
Dufour, A. P., *Klebsiella* characteristics 872
Duggan, J. B., oxygen uptake 540

E

Economic aspects of control (literature review) 1648
Editorials
Federation objectives in 1976 1
Industrial employment and the environment 229
Moving toward metric 421
A plea for flexibility 621
Implementing NCWQ's recommendations . 809
The literature review, as readers see it .. 997
Making NEPA more effective 1681
Agency rules and the Congressional veto 1873
Politics and pollution control 2237
The widening scope of WPCF conferences 2097
Efficiency, air and oxygen activated sludge 2472, 2511
Egdorf, S. S., pollution distribution 867
Eichhorn, H. C., diversity indexes 736
Elliott, W. R., sludge conditioning and incineration 1955
Ellis, D., outfall monitoring 429
Employment, effect of regulations (editorial) 229, 278a
Endogenous respiration, in microbial product formation 2046
Enforcement permits, for municipalities ... 422
Engelbrecht, R. S., thermophilic treatment . 669
Enkiri, N. K., sludge composting 688
Enteric bacteria, dispersion by spray irrigation 710
Enteric viruses, inactivation of 61
Environmental control, views of presidential candidates 2238
Environmental education, enrollment trends 1690
Environmental expenditures 816
Environmental impact, of sludge on land .. 2332
of wastewater management 1759
EPA
Briedenbark appointment 6
cost of clean water report 1874
implementation of PL 92-500 (book review) 238
limits on fecal coliforms 632
new cost index 233
ocean disposal in Region III 2246
proposals for PL 92-500 amendments ... 424
R&D priorities 816
toxics control program 810
views on Sec. 208 planning 1692
EPA Program guidance memoranda
combined sewer overflows and stormwater (PG 61) 88a
allowable costs for grants (PG 62) 88a
user charges (PG 65) 282a
land acquisition costs (PG 67) 282a
Epstein, E., sludge composting 688
Estuarine pollution (literature review) 1439
Esvelt, L. A., cattle feed 2778
Eutrophication (literature review) 1335
algal bioassay 2351
chemical treatment to remove phosphates . 2153
chlorophyll and phosphorus concentrations 2176
Expenditures, for pollution control 432a

F

Fan, L. T., multistage clarifiers 2578
Farooq, S., poliovirus inactivation (Discussion) 593
Fats, determination 2809
Fecal coliforms, correlation with *Pseudomonas aeruginosa* 367
EPA effluent limitations 632
Fecal indicators, *Klebsiella* 872, 1766
Federal WQA, meeting report 437a
Feedlots, runoff from 153
Fermentation industry wastes (literature review) 1229
Fermentation tube, recovery of coliforms by 533
Ferris, J. J., molecular weight 570
Ficke, H. H., catalytic oxidation 920
Filter denitrification, pore diffusion effects . 377
Fish, attraction to chlorine 592
methylmercury uptake by 473
toxicity of polyelectrolytes 183
Fisher, R. A., kinetic models activated sludge process (Discussion) 1846
Fitch, B., sludge quality 1979
Flegal, T. M., BOD temperature effects 2700
Flocculants, toxicity to fish 183
Florida PCA, meeting report 93a
Flow, data collection in infiltration/inflow analysis 2055
Flow equalization, activated sludge process use of aeration tank volume (Speece, LaGrega) 2599
Foam fractionation, kraft effluent detoxification 502
Foam separation, for detoxification of kraft mill effluent 458
of cadmium 2747
Fogarty, T. J., reservoir modeling 134
Food:microorganism ratio, process design .. 147
Food waste, sauerkraut brine ozonation 748
Francisco, D. E., phosphorus removal 2002

Freshwater fish, effects of pollution on (literature review) 1544
Freshwater macroinvertebrates (literature review) 1318
Fruit, vegetable, and grain processing wastes (literature review) 1223
Fuller, W. H., natural leachate preservation 959

G

Gaffney, P. E., carpet industry 2590
Gaudy, A. F., Jr., activated sludge 906
Genesee River, effects of photoprocessing wastes 389
Gerber, H. B., activated sludge 163
Gerhold, R. M., algal bioassays 2351
Giannelli, J. F., vanadium removal 762
Gilbert, W. G., plant efficiency 1822
Goldman, J. C., algal growth kinetics 2215
Gould, J. P., phenol ozonization 47
Graduate study, trends in environmental programs 1690
Grant aid, for plant operation 2529
Gray, A. C. Jr., activated sludge 163
Grease, volumetric determination 2809
Greene, C. S., benthos near ocean outfall .. 1894
Grenney, W. J., planning parameters 2690
Groundwater pollution (literature review) . 1420
from anaerobic lagoons 695
Gundelach, J. M., oxygen sag 1753
Guthrie, R. K., microbial populations 962

H

Harbold, H. S., kinetic models activated sludge process (Discussion) 202
Harder, U. M., fish attraction to chlorine (Communication) 592
Harrell, R. C., refinery holding pond 2249
Harremoës, P., filter denitrification 377
Harrisburg, Pa., upgrading treatment at ... 163
Hart, H. H., cattle feed 2778
Havell, R. F., loads on buried pipe 1988
Hawaii WPCA, meeting report 287a
Hazardous spills, regulations on 236
Health factors, for recreational water use .. 2761
Heat treatment, of primary and waste activated sludges 163
Heavy metals (literature review) 1459
chromium removal 2032
silver, in photoprocessing wastes 389
Heesen, T. C., DDT residues 1919
Heidman, J. A., nitrification-denitrification . 520
Heinemann, W. W., cattle feed 2778
Hekimian, K. K., recreational water 2761
Hendricks, A. C., LAS lethality 2570
Herbicide, use for control of aquatic plants 2738
Hetling, L. J., grant aid 2529
Higgins, B. P. J., lake treatment 2153
Hills, D. J., infiltration from lagoons 695
Hinesly, T. D., sludge effects on soil 1728
soybean yield 2137
Historical trends, in pollution control 1682, 746a
Holmberg, D. J., endothall 2738
Household systems, efficiency of septic tile . 934
Houston, Tex., areawide planning 1692
Huang, P. M., phosphorus adsorption 2754
Huff, E. S., Willamette River 2410
Huntley, B. E., *Klebsiella* densities 1766
Huston, M. T., residue determinations 652
Hwang, C. P., phosphorus adsorption 2754
Hyde, H. C., sludge utilization for agriculture 77
Hydraulics, of sewers 1772
Hydrogen peroxide, for odor control 297

I

Indexes of similarity, aquatic communities . 717, 2812
Indexes of water quality, comparison 954
Indiana WPCA, meeting report 153a
Industrial effluent, wool scouring, ultrafiltration 945
Industrial waste treatment, stoichiometry of 742
Industrial wastes, plastics manufacturing .. 256
silver from photoprocessing 389
sulfate removal 2804
textile dye treatment 2198
textile industry 2731
vanadium removal 762
Infiltration, from anaerobic lagoons 695
Infiltration/inflow analysis, flow data collection 2055
Inhibition, nitrification 835
Inorganic species, nature and analysis (literature review) 998
Institute of Public Health Engineers, meeting report 153a
Instrumentation and automation (literature review) 1206
Institute of Water Pollution Control meeting report 95a
Iodination, virus inactivation 61
Ion exchange, removal of organics 120
Iowa WPCA, meeting report 95a
Iron, distribution in sediments 2007
Irvine, R. L., lake treatment 2153

J

Jeris, J. S., *New York Bight* 2309
Johnson, W. K., sludge conditioning and incineration 1955
Johnston, H. K., reverse osmosis 1804
Jones, A. C., *Klebsiella* densities 1766
Jones, J. R., phosphorus and chlorophyll ... 2176
Jones, R. L., soybean yield 2137
Jour. Water Poll. Control Fed., use of metric system 421

K

Kalinske, A. A., oxygen activated sludge ... 2472
Kao, C. F., yeast processing wastes 2609
Kaplan, A. M., nitrocellulose disposal 660
Karn, B. P., nutrient enrichment studies (Communication) 2211

Katz, B. M., fish attraction to chlorine (Communication) 592
Katzenelson, E., bacterial aerosol dispersion 710
Katzer, J. R., catalytic oxidation 920
Kawata, K., virus inactivation 61
Keeney, C., loads on buried pipe 1988
Keeney, D. R., denitrification 2018
Kelling, K. A., sludge application to crops .. 2190
Kennedy, H., *Pseudomonas aeruginosa* and fecal coliforms as bioindicators 367
Kessick, M. A., salt water waste 2131
Kim, B. R., adsorption by synthetic resins .. 120
Kincannon, D. F., nitrification 645
Kinetics, effects of temperature on BOD 2700
filter denitrification 377
nitrifying activated sludge process 1779
model of substrate utilization 9
model studies of substrate utilization ... 281
King, P. H., treatment of textile waste 753
Klebsiella, from wood pulp effluents 1766
in textile finishing wastes 872
Kleerebezem, G. J., activated carbon 551
Klemetson, S. L., planning parameters 2690
Klimek, J. C., grant aid 2529
Klingeman, P. C., Willamette River 2410
Korte, N. E., natural leachate preservation . 959
Kos, P., sludge quality 1979
Kraft mill effluent, detoxification of ... 458, 502
Krenkel, P. A., methylmercury 473
Krishnan, P., activated sludge 906
Kruse, C., virus inactivation 61
Kulin, G., Palmer-Bowlus flumes (Discussion) 200
Kunz, R. G., vanadium removal 762

L

Lackie, T. H., phosphorus adsorption 2754
Lafayette, P. F., poultry processing 2394
Lagoons, refinery wastes 2249
kraft effluent detoxification 502
Lagoons and oxidation ponds (literature review) 1107
La Grega, M., flow equalization 2599
Lakes, chlorophyll and phosphorus relationships 2176
phosphorus adsorption on sediments 2754
Lake restoration, nutrient diversion and inactivation 817
Lake treatment, with flyash, lime, and gypsum 2153
Lance, J. C., nitrogen removal 346
Land application of wastewater (literature review) 1180
effects on soil 1728
environmental effects 2332
EPA-Corps of Engineers study 432a
of digested sludge 2332
sludge nutrient uptake 2190
crop yields 2190
Landwehr, J. M., water quality 954
Larson, T. E., denitrification with methane . 1840
Lawrence, A. W., activated sludge 889
nitrifying activated sludge 1779
Least cost design, of activated sludge systems 889
Lee, C. R., multistage clarifiers 2578
Lee, G. F., endothall 2738
nitrogen in urban runoff 339
phosphorus in urban runoff 580
Lefebvre, L., nitrification in contact stabilization 2183
Legislation (literature review) 1656
Congressional veto of regulations (editorial) 1873
H. R. 9560 812
Lemke, A. E., polyelectrolyte toxicity 183
Leseman, W. G., packed-bed reactor 880
Levin, M. A., *Pseudomonas aeruginosa* and fecal coliforms as bioindicators 367
Lim, H. S., reverse osmosis 1804
Lime, effects on treatment plant operation .. 1697
treatment of textile wastes 753
precipitation of orthophosphate 179
Littlepage, J., outfall monitoring 429
Loading, effect on activated sludge oxygen uptake 540
Loads, effects on buried pipe 1988
Loehr, R. C., nitrification inhibition 835
Logsdon, O. J. II, residue determinations .. 652
Louisiana WPCA, meeting report 289a
Lue-Hing, C., land application of sludge ... 2332
nitrification 25
Lysis, of coliform bacteria 533

M

Mack, P. J., grant aid 2529
Macroinvertebrates, diversity of 736
time-temperature exposure, thermal inpact 2259
Mahoning River, exemptions for steel mills 815, 1880
Maintenance energy, source in biological processes 2046
Manchen, K. L., salt water waste 2131
Manganese, distribution in sediments 2007
Manley, J. L., coliform recovery 533
Margrey, S. L., thermal impact 2259
Marine biota, effluent effects on 1894
Marine organisms, near deepwater outfalls . 1881
Marine pollution (literature review) 1439
Marles, E., outfall monitoring 429
Mars, P., activated carbon 551
Mathematical model, microbial product formation 2046
nitrification in streams 2380
of biochemical stoichiometric principles .. 742
of biological treatment system 1834
phosphorus in packed-bed reactors 880
stream self-purification 1753
vented hydroturbine reaeration 357
Matrixes, for determining environmental impacts 1759
Matsch, L. C., oxygen activated sludge ... 2486
Matson, J. V., aeration equipment performance (Discussion) 966
Matson, M. L., aeration equipment performance (Discussion) 966

Mattice, J. S., chlorination toxicity 2284
Mavinic, D. S., aeration systems 2273
Maxcy, R. B., grease determination 2809
Maynes, J. S., infiltration/inflow 2055
McCarty, P. L., substrate kinetics 9, 281
McCoy, C. J., use of spent refinery catalyst in wastewater treatment 274
McDermott, D. J., DDT residues 1919
trace metals 1913
McDowell, C. S., nitrification toxicity test .. 2343
McGhee, T. J., feedlot runoff 153
soil adsorption 1970
McVaugh, J., Lagoons (Discussion) 1843
Mean cell residence time, effect on P removal 307
Mearns, A. J., sub-lethal chromium effects . 1929
trace metals 1913
Meat, fish, and poultry processing wastes (literature review) 1217
Mechalas, B. J., recreational water 2761
Member association reports
North Carolina WPCA 93a
Florida PCA 93a
Nebraska WPCA 153a
Indiana WPCA 153a
Institute of Public Health Engineers 153a
New England WPCA 155a, 501a
Oklahoma W&PCA 155a
Hawaii WPCA 287a
New York WPCA 287a
Missouri WPCA 289a
Louisiana WPCA 289a
Federal WQA 437a
Montana WPCA 437a
Nevada WPCA 437a
Mississippi WPCA 439a
Utah WPCA 439a
Arkansas WPCA 439a
Ontario WPCA 441a
AQTE 441a
New Jersey WPCA 441a
Iowa WPCA 501a
Michigan WPCA 501a
Central States WPCA 501a
West Virginia WPCA 693a
Virginia WPCA 693a
Arizona WPCA 693a
Membrane filter method, coliform testing .. 724
Membrane filtration, recovery of coliforms by 533
Mercury, biomethylation 473
Merrill, M. S., activated sludge 2511
Metabolism of aquatic organisms, in refinery lagoon 2249
Metal plating and cyanide wastes (literature review) 1295
Metals, cadmium removal 2747
effects of traces in sludge disposal 77
extraction procedure in sludge 2165
silver in photoprocessing wastes 389
toxicity by BOD test 853
vanadium removal 762
Meteorological monitoring, of wastewater aerosols 2367
Methodology, for water quality criteria ... 2761
Methylation, effects of 473
Methylmercury, uptake by fish 473
Microbiology
of water (literature review) 1338
of waste treatment (literature review) .. 1367
water borne diseases (literature review) . 1378
bacterial pathogens and their occurrence (literature review) 1397
virus detection, occurrence, and removal (literature review) 1410
Metric system, usage in JWPCF 421
in wastewater treatment 188
Michigan WPCA, meeting report 501a
Micromethods, filterable and nonfilterable residue determinations 652
Middleton, A. C., activated sludge 889
calculating average pH (Discussion) .. 395
Miller, R. A., soil adsorption 1970
Minear, R. A., coal mining impact 2549
Minneapolis-St. Paul, pollution control program 2107
Minton, G. R., lime addition effects 1697
Mississippi WPCA, meeting report 439a
Missouri WPCA, meeting report 289a
Mixing, by broken-spiral aerators 256
Mixing and transport (literature review) .. 1620
Modeling, reaeration in streams 2669
reservoir water quality 134
Mohleji, S. C., lake treatment 2153
Monitoring (literature review) 1077
marine outfalls 429
water quality in waterfowl refuge 680
Montana WPCA, meeting report 437a
Moore, L., COD silver catalyst 2327
NTA degradation 2406
Mowat, A., coliform testing 724
metal toxicity by BOD 853
MPN method, coliform testing 724
Mueller, J. A., *New York Bight* 2309
Mueller, J. C., foam separation 458
kraft effluent detoxification 502
Mueller, H. F., denitrification with methane 1840
Mullen, D. C., sludge composting 688
Municipal financing, for construction grants 627
Municipal-industrial plants, odor control in 297
Municipal wastewater treatment, efficiency of 1822
enforcement of permits 422
Murphy, J. J., photoprocessing wastes 389
Mutants, role in acclimation 832

N

Narragansett Bay, nutrients in sediments .. 2007
Natural leachates 959
National Commission on Water Quality, listing of available reports 2427
report on hearings 230
report of (editorial) 621
recommends changes to PL 92-500 622
implementation or recommendations (editorial) 809

Neal, L. A., reaeration measurement 2669
Nebraska WPCA, meeting report 153a
NEPA, effectiveness of (editorial) 1681
Nevada WPCA, meeting report 437a
New England WPCA, meeting report 155a, 501a
New Jersey WPCA, meeting report 441a
New York, N. Y., ocean dumping curbs ... 2246
New York WPCA, meeting report 289a
Neufeld, R. D., activated sludge deflocculation 1940
Ng, K. S., foam separation 458
Niebla, E. E., natural leachate preservation 959
Nitrilotriacetic acid, anaerobic digestion .. 2406
Nitrogen, distribution in sediments 2007
Nitrogen deficient wastes, treatment by activated sludge 1992
Nitrification, activated sludge processes ... 1779
alkalinity destroyed by 1834
in contact stabilization 2183
in natural streams 2380
inhibition by ammonia and nitrous acid . 835
one- and two-stage systems 645
rate constant calculation 2380
of sludge supernatant 25
toxicity test 2343
Nitrification-denitrification, single-stage process 520
Nitrocellulose, chemical-biological treatment 660
Nitrogen, added to wastewater 742
distribution in biological treatment 562
algal availability 339
removal of 346, 377, 520
Nitrogen cycles, models of 134
Nitrous acid, nitrification inhibition 835
Non-pathogenic model, for detecting animal viruses 2416
Nonpoint sources, control strategy 4
North Carolina WPCA, meeting report 93a
NPDES permits, role of analytic techniques 1876
compliance by municipalities 422
NTA, anaerobic degradation 2406
Nutrient distribution, in biological treatment 562
Nutrient inactivation, evaluation of 817
Nutrient removal, reverse osmosis 1804
Nutrients, algal bioassay 2351
Nutrients, design of enrichment studies ... 2211
distribution in sediments 2007
Nutrient enrichment studies, design of 2211

O

Obayashi, A. W., nitrification 25
Ocean disposal of sludge, EPA regulations 426, 2246
dispersion from barges 2541
into New York Bight 2309
Ocean outfalls, effects on benthos 1894
Octacalcium phosphate, precipitated by lime 179
Odor control, sludge composting 688
with hydrogen peroxide 297
Oil, volumetric determination 2809
Okamoto, Y., foam separation of cadmium . 2747
Oklahoma W&PCA, meeting report 155a
Oliver, B. G., UV disinfection 2619
O'Neal, M. V., feedlot runoff 153
Ontario WPCA, meeting report 441a
Operating costs, phosphorus removal 1948
Operation, final settling tank 633
reimbursement of costs by state 2529
trickling filters, mass transfer 771
Operation and maintenance, plant efficiency 1822
Organic carbon, BOD and COD correlation .. 2213
for denitrification 346
recovery from secondary effluents 570
Organic removal, from textile waste 753
Organic species, nature and analysis (literature review) 1042
Organic wastes, nitrogen deficient 1992
Orlando, J. R., treatment of weak wastewater 2708
Orthophosphate solids, formed by lime precipitation 179
O'Shaughnessy, J. C., total organic carbon .. 2791
Oshida, P. S., sub-lethal chromium effects . 1929
Otto, R. G., algal bioassays 2351
Outfalls, organisms near 1881
Overman, A. R., packed-bed reactor 880
Oxidation, in natural streams 2380
of phenols by ozone 47
Oxidation-reduction, continuous flow column 2018
Oxygen activated sludge, compared with air system 2486
Oxygen activated sludge, efficiency .. 2472, 2486, 2511
Oxygen concentration, models for 134
Oxygen sag, anaerobic conditions 1753
Oxygen sag and stream purification (literature review) 1417
Oxygen transfer, aeration system efficiency 2273
trickling filter design 771
Oxygen uptake, effect of activated sludge process loading 540
effect of temperature on BOD 2700
Ozonation, of sauerkraut brine 748
reaction kinetics 748

P

Paper and paper product wastes (literature review) 1234
Parker, D. S., activated sludge 2511
Pathogens, *Klebsiella* in textile wastes 872
Klebsiella wood pulp effluents 1766
removal from composted sludge 688
detection and occurrence (literature review) 1397
Paul, P. E., activated sludge 163
odor control 297
Pearson, A. J. C., ultrafiltration 945
Pearson, J. G., similarity coefficient ... 717, 2812
Pecorelli, H., organisms near outfall pipes . 1881
Penalties, for hazardous spills 236
Personnel requirements, estimating for treatment plants 241
Pesticides, residues near outfalls 1919
Peterson, A. E., sludge application to crops . 2190
Peterson, J. R., land application of sludge . 2332
Peterson, S. A., lake restoration 817
Petrochemical waste, use for spent catalyst in sludge treatment 274

Petroleum processing wastes (literature review) 1293
pH, stream pollution, by acid mine drainage 91
optimum for ss removal 107
Phenols, absorption of 120
catalytic oxidation of 920
ozonization of 47
Philadelphia, ocean disposal of sludge 426
Phillips, K. J., wastewater management impacts 1759
Phosphorus, added to wastewater 742
adsorption on lake sediments 2754
availability in runoff 580
biological removal 307
concentration prediction in lakes 2176
distribution in sediments 2007
distribution in biological treatment 562
removal by alum 2002
transport in packed-bed reactors 880
Phosphorus removal, by alumized red mud solids 1948
by chemical treatment 2153
by lime precipitation 179
Photoprocessing wastes, effects of silver ... 389
Physical-chemical treatment (literature review) 1086
catalytic oxidation 920
of textile wastes 753
of weak wastewater 2708
salt water waste 2131
effects of pretreatment on adsorption ... 323
powdered carbon 511
Pinkham, C. F. A., similarity coefficient 717, 2812
Pipe, loads on buried pipeline 1988
PL 92-500, implementation (book review) 238
proposed amendments 424, 812
Planning, parameters for treatment systems 2690
under PL 92-500, Sec. 208 1692
Plant efficiency, operation and maintenance 1822
Plastics manufacturing, waste treatment ... 256
Poliovirus, inactivation in wastewater 61
Pollution control, historical development of . 1682
political factors (editorial) 2237
Pollution surveys, similarity coefficients in . 717, 2812
Polyelectrolytes, toxicity to fish 183
Polysaccharides, presence of *Klebsiella* in .. 872
Popp, C. J., water quality in waterfowl refuges 680
Poon, C. P. C., nutrients in sediments 2007
Porter, J. J., biodegradability 2198
Poultry processing, dissolved air flotation in 107
Poultry processing, wastewater treatment .. 2394
Power plant design, effect on macroinvertebrates 2259
Power plants, cooling water chlorination ... 2284
Powers, C. F., lake restoration 817
Prakasam, T. B. S., nitrification inhibition . 835
Prasad, C., bacterial acclimation 832
Pseudomonas aeruginosa, as bioindicators of pollution 367
Pseudomonas aeruginosa-fecal coliform relationships 367
Public health, land disposal of sludge 77
Pulp mill wastes, detoxification 502
Pym, R., outfall monitoring 429

Q

Quigley, J. T., vented hydroturbine reaeration 357

R

Radioactive wastes (literature review) 1305
EPA regulations 496a
Ramm, A. E., nutrient enrichment studies (Communication) 2211
Randall, C. W., contact stabilization 147
treatment of textile waste 753
Reactors, phosphorus transport in packed-bed 880
Reaeration, in nontidal streams 2669
in vented hydroturbines 357
Reclamation and reuse of water (literature review) 1174
Recreational waters, pollution indicators ... 367
quality of 2761
Recycle, to improve nitrification 25
Reed, S. W., dissolved air flotation 107
Refineries, metabolism in holding ponds ... 2249
Regional planning, wastewater transmission systems 2120
Reish, D. J., sub-lethal chromium effects .. 1929
Remote sensing of water quality 2243
Residue analysis, micromethods for 652
Research and development, EPA priorities .. 816
Restoration, of the Willamette River 2410
Reverse osmosis, nutrients and chemicals removal 1804
Reynolds, T. D., ocean disposal 2541
Rhode Island, nutrients in bay sediments .. 2007
Richardson, L. B., thermal impact 2259
Ritter, E. D., nitrification toxicity test 2343
River quality, effect of restoration 2410
Rocheleau, R. F., plastics manufacturing wastes 256
Rochester, N. Y., photoprocessing wastes .. 389
Rotating disks, for biological nitrification .. 25
Rovers, F. A., calculating average pH (Discussion) 395

S

Sachdev, D. R., molecular weight 570
Sadana, A., catalytic oxidation 920
Salmonella, in wood pulp effluents 1766
removal from composted sludge 688
Salt water, domestic waste, treatment of .. 2131
Sampling procedures (literature review) .. 1077
Sanville, W. D., lake restoration 817
Saunders, F. M., adsorption by synthetic resins 120
Sawyer, B. M., nitrification 25
Schaub, S. A., bacterial aerosols 2367
Schiemann, D. A., coliform recovery 533
Schroeder, E. D., BOD temperature effects . 2700
Stoichiometry 742
trickling filter design 771

Schwartz, R. D., use of spent refinery in wastewater treatment 274
Secondary effluent, denitrification soil columns 346
Secondary effluents, characterization of ... 570
Sediments (literature review) 1433
nutrient distribution 2007
phosphorus adsorption 2754
Sedimentation, effects of lime 1697
Sedimentation of wastewater, experiments on 1741
Sedimentation tanks, models of 1741
Sekoulov, I., hydrogen peroxide (Discussion) 198
Septic tank effluent, denitrification of 2018
Septic tile system, efficiency of 934
Settleability, of activated sludge 1979
Settling columns, tests on wastewater 1741
Settling tanks, in series 2578
design 633
Sewers, design hydraulics 1772
hydrogen sulfide in 1772
preoptimization of regional systems 2120
self-cleaning properties 1772
Shane, R., acid mine drainage 91
Shannon, E. E., phosphorus removal 1948
Sheih, J. M. S., nutrients in sediments 2007
Shelley, M. L., treatment of textile waste .. 753
Sheridan, R. P., calculating average pH ... 2217
Sherman, R. M., sauerkraut brine ozonation 748
Sherrard, J. H., alkalinity 1834
distribution diagrams 562
phosphorus removal 307
stoichiometry 742
Sherwood, M. J., sub-lethal chromium effects 1929
SI system, in waste treatment 188
Siegal, B. A., refinery holding pond 2249
Sikora, L. J., denitrification 2018
Silver catalyst, alternatives to in COD 2327
Silviera, D. J., metals in sludge 2165
Shin, E. B., methylmercury 473
Shock loads, in activated sludge systems ... 906
Silver, in photoprocessing wastes 389
Similarity coefficient, in pollution surveys 717, 2812
Singleton, F. L., microbial populations 962
Sirisinha, K., nitrogen in urban runoff 339
Sludge, dewatering in cannery 2778
effects on soil biology 1728
land application 1728, 2190, 2332
source of activated carbon 551
use as fertilizer 1728
Sludge age, effect on process design 147
Sludge application, increasing soybean yield 2137
Sludge disposal, composting 688
on agricultural crops 77
EPA bulletin 432a
restrictions on ocean dumping 2246
EPA decision on ocean disposal 426
Sludge handling, thermal conditioning 163
using polyelectrolyte conditioners 1955
Sludge properties, effect of spent refinery catalysts on 274
Sludge quality, index of 1979
Sludge supernatant, biological nitrification of 25
Sludge treatment and disposal (literature review) 1137
effects of liming raw waste 1697
Sludge volume index, deficiencies of 1979
Small, M. J., bacterial aerosols 2367
Smedberg, C. T., cyanophage analysis 2416
Smith, R. W., benthos near ocean outfall . 1894
Smith, W. E., polyelectrolyte toxicity 183
Smock, L. A., diversity indexes 736
Snider, E. H., biodegradability 2198
Snoeyink, V. L., adsorption by synthetic resins 120
Sodium tripolyphosphate, effect on phosphorus removal 2002
Soil, adsorption of humic color 1970
assimilation of zinc and cadmium in soybeans 2137
infiltration to 695
Soil columns, denitrification in 346
Soil water, from septic tiles 934
Solids removal, multistage clarification 2578
Solid wastes, effect on water quality (literature review) 1299
Sollo, F. W., Jr., dinitrification with methane 1840
Solubility products, of phosphate precipitants 179
Sommers, L. E., metals in sludge 2165
Sorber, C. A., bacterial aerosols 2367
South Carolina W&PCA, meeting report 95a
Soybean, assimilation of zinc and cadmium . 2137
Species abundance, relation to community similarity 717, 2812
Specific growth rate, response to shock loads 906
Speece, R. E., flow equalization 2599
Spray irrigation, with wastewater 710
Srinath, E. G., nitrification inhibition 835
ss removal, by dissolved air flotation 107
combined with detoxification 458
Stability, problems at an activated sludge plant 2653
Staffing, of treatments plants 241
Stall, T. R., phosphorus removal 307
Stamberg, J. B., nitrification-denitrification . 520
Standards and surveys (literature review) . 1665
State assistance, for operating costs 2529
Stay, F. S., lake restoration 817
Steel industry wastes (literature review) .. 1287
exemptions from guidelines 815, 1880
Stensel, H. D., nitrification toxicity test ... 2343
vanadium removal 762
Stoichiometry, of biological treatment 1834
Stone, D. L., photoprocessing wastes 389
Stoneburner, D. L., diversity indexes 736
Stover, E. L., nitrification 645
Stover, R. C., metals in sludge 2165
Strauss, M., phosphorus removal 2002
Stream pollution, acid mine drainage 91
distribution in lake water 867
Streams, anaerobic self-purification conditions 1753
Sub-lethal effects, of chromium 1929
Substrate growth, effect of shock load 906
Substrate kinetics, model of 9, 281
Substrate utilization, microbial product formation 2046
Sulfates, coagulation of 2804
removal from wool wastewater 2804
Surface mining, effect on drainage basins . 2549

Surface water pollution (literature review) 1420
Surfactant, toxicity to fish 2570
Surucu, G. A., thermophilic treatment 669
Suspended growth denitrification 377
Sykes, R. M., microbial product formation . 2046
Synthetic resins, adsorption properties of . 120
System analysis (literature review) 1639

T

Taconite tailing disposal, effect on algae 144a, 681a
Takamatsu, T., multistage clarifiers 2578
Tannery waste management (literature review) 1280
Tchobanoglous, G., trickling filter design .. 771
Teltch, B., bacterial aerosol dispersion 710
Temperature, effect on BOD 2700
effect on macroinvertebrates 2259
Terhaar, C. J., photoprocessing wastes ... 389
Tertiary treatment, poultry processing wastewater 2394
Tew, R. W., pollution distribution 867
Textile chemicals, biodegradation of 2198
Textile wastes (literature review) 1282
presence of *Klebsiella* 872
treatment of 753, 2590
Theis, T. L., chromium removal 2032
Thermal effects (literature review) 1486
on macroinvertebrates 2259
Thermal loading, effect on microbial populations 962
Thermal stratification, in deep reservoirs .. 134
Thirumurthi, D., treatment of weak wastewater 2708
Thomas, M. J., chromium removal 2032
TOC, correlation to BOD and COD 2791
TOC reduction, phenol ozonization 47
Toxic substances, EPA control of 810
Toxicity, BOD test for measurement 853
chlorinated cooling water 2284
of LAS surfactant 2570
of chromium 1929
test for nitrification 2343
trace metals 1913
Trace elements, literature review 1459
Trace metals, biological effects 1913
near submarine outfall 1913
Tracers, bacterial 867
for reaeration rate determination 2669
Transport processes, phosphorus in packed-bed reactor 880
Trickling filters, mass transfer 771
dosing pattern 2723
Tschantz, B. A., coal mining impact 2549
Tsivoglou, E. C., reaeration measurement . 2669
Turbines, reaeration in 357
Tyler, J. J., soybean yield 2137
Tyo, R. M., polyelectrolyte toxicity 183
Tyteca, D., regional wastewater systems ... 2120

U

Units of expression, MOP 6 188
for bacterial counts 746a
Uhte, W. R., plant upgrading 2653
Ultrafiltration, treatment of wool scouring effluents 945
Ultraviolet radiation, for disinfection 2619
Uptake rates, of methylmercury by fish .. 473
Urban runoff, nitrogen in particulate materials 339
particulate phosphorus in 580
Urban runoff and combined sewers, literature review 1191
Utah WPCA, meeting report 439a

V

Vandervoort, T. J., Minn. St. Paul pollution control 2107
Vanadium, removal from wastewater 762
Varanka, M. W., sludge effects on soil ... 1728
Varma, M. M., bacterial acclimation 832
Verghese, K. I., phosphorus removal 1948
Viraraghavan, T., organic carbon measurement 2213
septic tile efficiency 934
Virginia WPCA, meeting report 693a
Virus detection and removal, literature review 1410
Viruses, detection in wastewater 2416
Virus inactivation, by chlorine and iodine . 61

W

Wagner, V. G., Presidential message 2098
Walden, C. C., foam separation 458
kraft effluent detoxification 502
Wallace, R. N., powdered carbon treatment 511
Walsh, L. M., sludge application to crops . 2190
Walter, R. H., sauerkraut brine ozonation .. 748
Wan, L. W., bacterial acclimation 832
Warnock, R. G., septic tile efficiency 934
Washington, B., nitrification 25
Wastewater, denitrification 346
evaluation of metals 2165
nitrification toxicity test 2343
Wastewater collection, literature review 1170
preoptimization of regional systems 2120
Wastewater discharge, deep marine outfall . 429
Wastewater dumping, into coastal waters .. 2309
Wastewater effluents, microbial populations in 962
Wastewater handling and disposal, using conditioners and incineration 1955
Wastewater management, environmental impacts 1759
Wastewater monitoring, viruses and coliforms 2416
Wastewater settling, effect on tank operation 1741
Wastewater treatment, catalytic oxidation . 920
dangers from aerosols 631
destabilization of effluents 729
destruction of alkalinity in 1834
distribution of influent elements 562
effects of lime addition 1697
effluent characterization 570
odor control 297
textile industry 2590
microbiology (literature review) 1367
phosphorus removal 1948

Wastewater treatment plants, staffing requirements 241
poultry processing 2394
thermophilic processes 669
ultrafiltration 945
Water characteristics, nature and analysis (literature review) 1037
Water quality, acid mine drainage 91
effect of coal surface mining 2549
effect of waterfowl refuge on 680
effect on benthic organisms 736
improvements on the Willamette River .. 2410
modeling 134
monitoring 429
remote sensing of 2234
use of TOC parameter 2791
Water quality indexes, comparison 954
Waterborne diseases, literature review 1378
Waterfowl refuge, water quality 680
Water treatment, chemical markets 815
Weak wastewater, biochemical treatment .. 2708
Weber, W. J., Jr., phenol ozonization 47
Weinstein, B. M., similarity coefficient 2812
Wendt, T. M., nitrocellulose disposal 660
Westrick, J. J., carbon adsorption 323
Whisler, F. D., nitrogen removal 346
White, J. B., wastewater sedimentation ... 1741
Williamson, K., substrate kinetics 9, 281
Willis, R., reservoir modeling 134
Willson, G. B., sludge composting 688
Wood, G. F., ultrafiltration 945
wastewater treatment 729
Wood pulp effluents, *Klebsiella* 1766
West Virginia WPCA, meeting report 693a
Woodard, F. E., dissolved air flotation ... 107
poultry processing 2394
Wool scouring effluents, biological destabilization 729
ultrafiltration of 945
Word, J., organisms near outfall pipes 1881
WPCF
49th conference program 2097, 581a
Presidential message 2098
suggested changes to PL 92-500 626
WPCF Directory-published as Part II of March issue: pagination separate from rest of volume 48:
Active member listing 5
Associate members 303
Consultant members 322
WPCF staff 367
Statement of policy 383
Committee listings 393
WPCF honors and awards 402
Author's Guide for JWPCF 446
Wu, Y. C., yeast processing wastes 2609

Y

Yang, P. Y., activated sludge 1992
Yao, K. M., sewer design 1772
Yeast processing wastes, biological and chemical treatment 2609
Yeasted, J. G., acid mine drainage 91
Young, D. R., DDT residues 1919
sub-lethal chromium effects 1929
trace metals 1913

Z

Zablocki, Z. M., sludge effects on soil 1728
Zand, S. M., water quality 2026
Zander, E. H., oxygen activated sludge 2486
Zenz, D. R., land application of sludge ... 2332
nitrification 25
Ziegler, E. L., soybean yield 2137
Zittel, H. E., chlorination toxicity 2284
Zoltek, J., Jr., nitrification in contact stabilization 2183
orthophosphates 179